

Chapter 8 Review Problems

8.3 – Parallelograms

1) If we have a quadrilateral with the property below, will it be a parallelogram?

Respond yes or no:

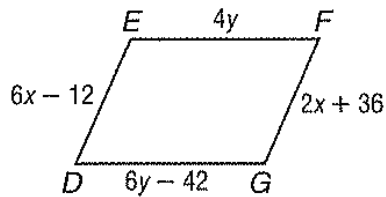
_____ The diagonals bisect each other.

_____ Opposite angles are different in measure.

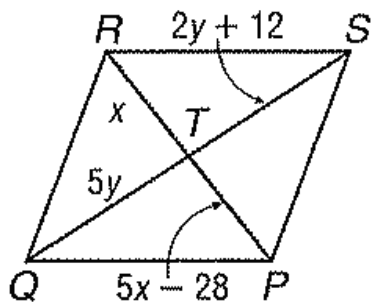
_____ Both pairs of opposite sides are congruent.

2) Find x and y so that each quadrilateral is a parallelogram.

a.



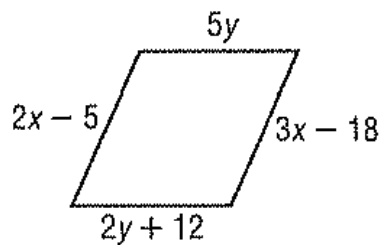
b.



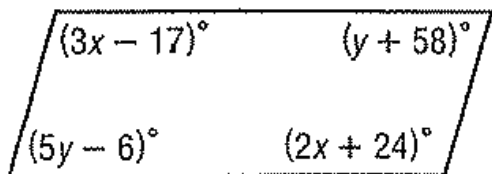
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3) Find x and y so that each quadrilateral is a parallelogram.

a.)



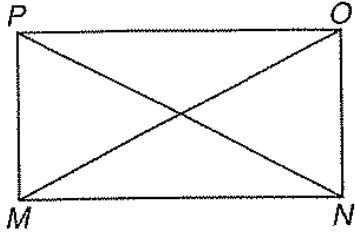
b.)



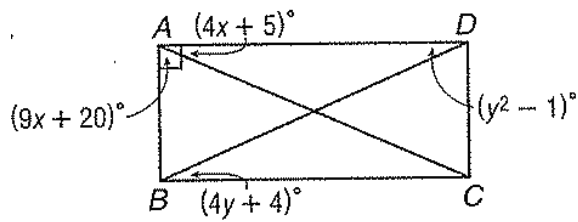
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8.4 – Rectangles

1) Quadrilateral MNOP is a rectangle. If $MO = 6x + 14$ and $PN = 9x + 5$, find x .



2) In Quadrilateral ABCD, find x .



3) Using the image from the previous problem. Find y .

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4) True or False

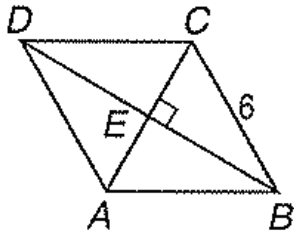
If the diagonals of a parallelogram are congruent, then the parallelogram is a rectangle.
Explain your answer.

5) If a television you are looking to buy has dimensions 21 inches high by 36 inches wide, and you know that T.V. screens are measured by the diagonals, what is the diagonal screen measurement of this T.V.? Round to the nearest inch.

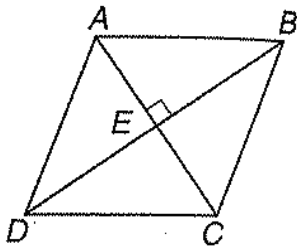
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8.5 – Rhombi and Squares

- 1) In rhombus ABCD, $m\angle DAB = 2m\angle ADC$ and $CB = 6$. Find AB. Show your work.



- 2) In rhombus ABCD, $AB = 2x+3$ and $BC = 5x$. Find x.



- 3) Using the image from the previous problem and the same dimensions. Find AD.

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4) Joaquin bought a set of stencils for his younger sister. One of the stencils is a quadrilateral with perpendicular diagonals that bisect each other, but are **not** congruent. What kind of quadrilateral is this piece?

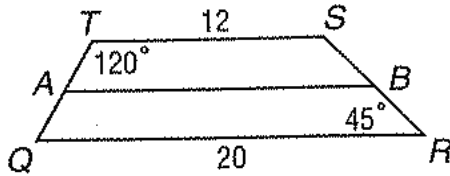
- a. square
- b. rectangle
- c. rhombus
- d. trapezoid

5) True or False. A square is a rhombus. Explain your answer.

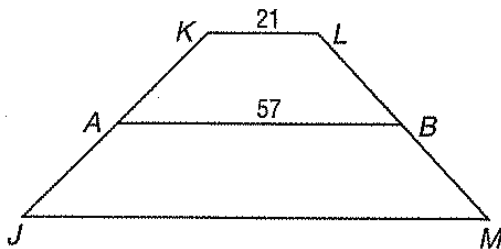
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8.6 – Trapezoids

- 1) For trapezoid QRST, A and B are midpoints of the legs. Find AB, $m\angle Q$, and $m\angle S$.



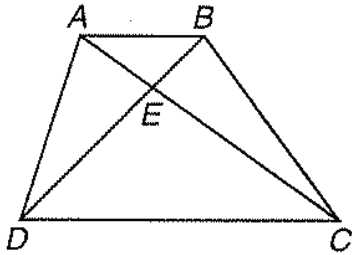
- 2) For trapezoid JKLM, A and B are midpoints of the legs. If $AB = 57$ and $KL = 21$, find JM.



- 3) True or False. The diagonals of an isosceles trapezoid are always congruent. Explain.

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- 4) In the diagram below, ABCD is a trapezoid with diagonals AC and BD intersecting at point E.



Which statement is true?

- a) AB is parallel to CD.
- b) $\angle ADC$ is congruent to $\angle BCD$.
- c) CE is congruent to DE.
- D) AC and BD bisect each other.

- 5) For isosceles trapezoid ABCD, X and Y are midpoints of the legs. Find $m\angle XBC$ if $m\angle ADY = 78$.

